

AMENDMENTS TO THE SPECIFICATION

Page 1, before paragraph [0001] please amend the title as follows:

~~VSB RECEIVER AND~~
~~METHOD FOR PROCESSING RECEIVING SIGNAL IN THE SAME~~
A VESTIGIAL SIDEBAND (VSB) RECEIVER

Please replace paragraph [0002] with the following amended paragraph:

[0002] The present invention relates to a Vestigial Sideband (VSB) receiver ~~and a method for processing a receiving signal in the same.~~

Page 1, before paragraph [0002], please replace the subheading with the following amended subheading:

Discussion of the Prior Related Art

Please replace paragraph [0006] with the following amended paragraph:

[0006] FIG. 1 illustrates a ~~related prior art~~ VSB communication system for a terrestrial digital television.

Please replace paragraph [0011] with the following amended paragraph:

[0011] The operation of the aforementioned ~~related prior art~~ VSB communication system will be described with reference to the accompanying drawings.

Please replace paragraph [0013] with the following amended paragraph:

[0013] The VSB modulated signal is transmitted from the transmitter to the receiver and can be expressed as follows.

$$v'c(t)=x'(t)\cos\omega ct+x'h(t)\sin\omega ct \quad \dots\dots\dots(1)$$

Please replace paragraph [0019] with the following amended paragraph:

[0019] The signal output from the second multiplier 13 can be expressed as follows.

$$v'i(t)=x'(t)\cos\omega_i(t)+x'h(t)\sin\omega_i(t) \quad \dots\dots\dots(2)$$

Please replace paragraph [0020] with the following amended paragraph:

[0020] Also, the signal passed through the second band pass matched filter 14 can be expressed as follows.

$$v_i(t)=x(t)+\cos\omega ct+xh(t)\sin\omega_i(t) \quad \dots\dots\dots(3)$$

Please replace paragraph [0031] with the following amended paragraph:

[0031] Accordingly, the present invention is directed to a VSB receiver and a method for processing a receiving signal in the same that substantially obviates one or more problems due to limitations and disadvantages of the prior related art.

Please replace paragraph [0032] with the following amended paragraph:

[0032] An object of the present invention is to provide a VSB receiver ~~and a method for processing a receiving signal in the same~~ that is not subject to frequency offset.

Please replace paragraph [0033] with the following amended paragraph:

[0033] Another object of the present invention is to provide a VSB receiver ~~and a method for processing a receiving signal in the same~~ that is based on a complex base band.

Please delete paragraph [0038] in its entirety:

[0038] ~~In another aspect of the present invention, a method for processing a signal in a VSB receiver having a tuner, includes the steps of: generating an intermediate frequency band signal by multiplying a received signal through the tuner by an intermediate frequency signal; generating a complex base band signal consisting of an I channel signal and a Q channel signal by multiplying the intermediate frequency band signal by an I channel local carrier wave signal and a Q channel local carrier wave signal; and complex matched filtering at least one of the I channel signal and the Q channel signal.~~

Please replace paragraph [0041] with the following amended paragraph:

[0041] FIG. 1 is a diagram illustrating a prior ~~related-art~~ VSB communication system for a terrestrial digital broadcasting;

Please replace paragraph [0044] with the following amended paragraph:

[0044] FIG. 4 is a block diagram illustrating a prior ~~related-art~~ VSB communication system that employs a base band matched filter;

Please replace paragraph [0056] with the following amended paragraph:

[0056] FIG. 7A is a diagram illustrating the complex base band matched filter 35 when the I channel and the Q channel are required. Referring to FIG. 7A, the complex base band matched filter 35 includes a first base band matched filter 351 filtering a real domain of the I channel signal, a second base band matched filter 353 filtering an imaginary domain of the I channel signal, a third base band matched filter 352 filtering a real domain of the Q channel signal, a fourth base band matched filter 354 filtering an imaginary domain of the Q channel signal, a first adder 355 adding the filtered real domain signals output from the first base band matched filter 351 and the ~~third second~~ base band matched filter 352 to output the resultant value as a new I channel signal, and a second adder 356 adding the filtered imaginary domain signals output from the ~~second third~~ base band matched filter 353 and the fourth base band matched filter 354 to output the resultant value as a new Q channel signal.

Please replace paragraph [0064] with the following amended paragraph:

[0064] The sixth multiplier 34a, as shown in FIG. 5A, multiplies the intermediate frequency band signal by the first local carrier wave signal $2\cos\omega t$ to demodulate the intermediate frequency band signal to the I channel signal h . The seventh multiplier 34b, as shown in FIG. ~~65B~~, the intermediate frequency band signal by the second local carrier wave signal $2\sin\omega t$ to demodulate the intermediate frequency band signal to the Q channel signal i .

Please replace paragraph [0069] with the following amended paragraph:

[0069] The complex signal has a frequency spectrum that is asymmetrical around 0, as shown in FIGS. ~~8A and 8B~~. FIG. 8A illustrates a frequency spectrum of the I channel signal, FIG. 8B illustrates a frequency spectrum of the Q channel signal, and FIG. 8C illustrates a frequency spectrum of the base band signal $r(t)$. The complex base band matched filter 35 has the same frequency characteristic as that of the transmitting signal.